

DOCKET NO: 283229US41PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
HIROYUKI OCHIAI, ET AL. : EXAMINER: HORNING, JOEL G.  
SERIAL NO: 10/560,173 :  
FILED: OCTOBER 6, 2006 : GROUP ART UNIT: 1712  
FOR: TURBINE COMPONENT, GAS :  
TURBINE ENGINE, METHOD FOR  
MANUFACTURING TURBINE  
COMPONENT, SURFACE PROCESSING  
METHOD, VANE COMPONENT, METAL  
COMPONENT, AND STEAM TURBINE  
ENGINE

DECLARATION OF KEISUKE KAWACHI  
UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

Sir:

1. I, Keisuke KAWACHI, as an expert in welding, give the following comments.  
My Curriculum Vitae showing my expertise is attached.

2. I have reviewed the publication No. H11-106948 (a JP family application of EP 1035231) to Koizumi et al. The art disclosed therein seems involved in, or is a modified version of, arc welding.

3. FIG. 2 of Koizumi clearly shows an electrode rod 8 connected to a positive pole of a power supply and a subject body 6 grounded via a negative pole, in which the electrode rod 8 is manually handled by means of a hand-held holder 9. This is a typical construction used in so-called "manual metal arc welding".

4. It is well-known in this art field that a constant current (or voltage) power supply is used to generate continuous arc. By way of contrast Koizumi does not expressly

describe its detail. A capacity of the power supply in manual metal arc welding is typically several hundreds amperes. A generated continuous arc is used for substantially fully fusing the tip of the electrode rod and causing the molten metal to adhere to the subject body.

5. I hereby declare that all the statements made herein of own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and the such willful false statements may jeopardize the validity of my patent application as originally filed and/or any patents to be issued and/or to be granted thereon.

*Keisuke Kawachi*

Signature: Keisuke Kawachi

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(OSMMN 11/10)

*June 15, 2011*

Date

## Curriculum Vitae

1983 Received a Bachelor of Engineering in welding technology; Osaka University

1985 Received a Master of Engineering in welding technology; Osaka University

### Present Post:

Manager, Production Planning Dept., Manufacturing Div., Aero-Engine &  
Space Operations

1985 Entered Ishikawajima-Harima Heavy Industries Co., LTD.(IHI), and staffed  
to Welding Research Dept. in Research Laboratory

1989 Transferred to Space Utilization & Development Dept., Space Development Div.,  
Aero-Engine & Space Operations

2004 Sent on loan from IHI to Galaxy Express Corp., as a manager responsible  
for research and development of hyper-generic technology.

2010 Returned to IHI Corp., and assigned to the present dept.

### Honor

1994 Received the Certificate of Appreciation from Space Shuttle Crews of STS-65  
in recognition of contribution to the successful flight.

### Certification

1994 Certified P.E. Jp (Professional Engineer, Japan) in the category of Aerospace.

Signed by,

Date: June 15, 2011

Keisuke Kawachi

Name: Keisuke Kawachi

Title: Manager

Production Planning Dept.

Manufacturing Div.

Aero-Engine & Space Operations

IHI Corporation